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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,288	03/28/2007	Masao Nonaka	2006_1309A	7151
52349 7590 12/23/2008 WENDEROTH, LIND & PONACK L.L.P. 2033 K. STREET, NW SUITE 800 WASHINGTON, DC 20006				
EXAMINER				
SQUIRES, BRETT S				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/589,288

**Applicant(s)**

NONAKA ET AL.

**Examiner**

BRETT SQUIRES

**Art Unit**

2431

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 08/11/06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Claim Objections***

1. Claim 8 is objected to because of the following informalities: claim 8 recites "an apparatus identifier," on page 66 line 6 and "an apparatus identifier," on page 66 line 13 it is unclear whether the recited claim limitations are intended to refer to the same apparatus identifier. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-7, 9-12, and 14-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 1 recites the limitation "the acquired verification value" on page 63 line 15. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "if the judging unit judges negatively," on page 63 lines 17-18, however no limitation is provided if the judging unit judges affirmatively. This issue is raised because the "if" conditional, by its very nature, exhibits alternative steps in the event the "if" conditional succeeds; the alternative step(s) may, or may not, be limited to not performing any step(s). Accordingly, the scope of the claim has not been clearly established. To correct this issue, the applicant must remove the conditional or include the alternative step(s) when the conditional fails.

5. Claim 9 recites the limitation "the acquired verification value" on page 67 line 25. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "if the judging unit judges negatively," on page 67 lines 27-28, however no limitation is provided if the judging unit judges affirmatively. This issue is raised because the "if" conditional, by its very nature, exhibits alternative steps in the event the "if" conditional succeeds; the alternative step(s) may, or may not, be limited to not performing any step(s). Accordingly, the scope of the claim has not been clearly established. To correct this issue, the applicant must remove the conditional or include the alternative step(s) when the conditional fails.

6. Claim 12 recites the limitation "if judging negatively," on page 69 line 8, however no limitation is provided if judging affirmatively. This issue is raised because the "if" conditional, by its very nature, exhibits alternative steps in the event the "if" conditional succeeds; the alternative step(s) may, or may not, be limited to not performing any step(s). Accordingly, the scope of the claim has not been clearly established. To correct this issue, the applicant must remove the conditional or include the alternative step(s) when the conditional fails.

7. Claim 14 recites the limitation "the acquired verification value" on page 70 lines 23-24. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "if the judging unit judges negatively," on page 70 line 26, however no limitation is provided if the judging unit judges affirmatively. This issue is raised because the "if" conditional, by its very nature, exhibits alternative steps in the event the "if" conditional succeeds; the alternative step(s) may, or may not, be

limited to not performing any step(s). Accordingly, the scope of the claim has not been clearly established. To correct this issue, the applicant must remove the conditional or include the alternative step(s) when the conditional fails.

***Claim Rejections - 35 USC § 101***

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claim 14 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 14 recites "a computer program used in a storage unit," this recitation is functional descriptive material and does not fall into at least one of the four statutory classes defined by 35 U.S.C. 101. A computer program, such as the recited computer program used in a storage unit, only imparts functionality when employed as a computer component, such as when a computer program is recorded on a computer readable medium. A computer program does not impart functionality when the computer program is simply used by an apparatus. If a claim covers material not found in any of those four categories, then the claim falls outside the plainly expressed scope of 35 U.S.C. 101, even if the subject matter is otherwise new and useful. *See In re Nuijten 84 USPQ2d 1495 (Fed. Cir. 2007)*

10. Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 17 recites "a computer program used by a content playback device," this recitation is functional descriptive material and does not fall into at least one of the four statutory classes defined by 35 U.S.C. 101. A computer

program, such as the recited computer program used by a content playback device, only imparts functionality when employed as a computer component, such as when a computer program is recorded on a computer readable medium. A computer program does not impart functionality when the computer program is simply used by an apparatus. If a claim covers material not found in any of those four categories, then the claim falls outside the plainly expressed scope of 35 U.S.C. 101, even if the subject matter is otherwise new and useful. *See In re Nuijten 84 USPQ2d 1495 (Fed. Cir. 2007)*

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-2, 7-8, and 12-19 are rejected under 35 U.S.C. 103(a) as being obvious over Kim et al. (US 2004/0213112) in view of Gammie (US RE39,166) further in view of Traw et al (US 5,949,877).

Regarding Claims 1 and 13-15:

Kim discloses system for preventing an illegally duplicated optical disc drive from performing a normal playback operation having a distribution unit ("Key Locker" See fig. 6 and paragraph 37) operable to store a first verification value ("Drive Key 0x0000" See fig. 7 and paragraphs 37-40) in correspondence with a verification apparatus identifier

("Drive ID" "Drive Maker AAA" See fig. 7 and paragraphs 28 and 37), generate a second verification value ("Drive Key 0x0001" See fig. 7 and paragraphs 37-40) that differs from the first verification value, store the second verification value in place of the first verification value ("The Drive Key 0x0001 replaces the Drive Key 0x0000 as the valid drive key for decrypting the content stored on an optical disc." See paragraphs 17 and 26), and distribute the second verification value to an apparatus ("Optical Disc Drive" See paragraphs 37-38) that is storing the verification apparatus identifier ("A consumer purchase an optical disc having a key locker and inserts the optical disc into the optical disc drive." See paragraphs 1-3 and 37-38), an acquiring unit ("The laser of optical disc drive reads the key locker portion of the optical disc." See paragraphs 36-37) operable to acquire from a portable medium ("Optical Disc" See paragraph 36-37) a target apparatus identifier ("Drive ID" "Drive Maker AAA" See fig. 7 and paragraphs 28 and 37) and a verification value ("Drive Keys" See fig. 7 and paragraphs 37-40) that have been written to the portable medium by a detection target apparatus ("New Key renewal information is recorded in new optical discs that are manufactured thereafter." See paragraph 38 [The examiner respectfully points out it is inherently disclosed that the content provider has a device for pressing discs.]).

Kim does not disclose a judging unit operable, if the target apparatus identifier matches the verification apparatus identifier, to judge whether or not the acquired verification value matches the second verification value, and a registering unit operable, if the judging unit judges negatively, to register the target apparatus identifier on an unauthorized apparatus list.

Gammie discloses a television set top box that contains a secret serial number ("SSN Memory" See fig. 2 ref. no. 212 and col. 3 lines 47-53) and a content key used to descramble television content ("Key Memory" See fig. 2 ref. no. 207 and col. 3 lines 47-53). The content key is updated in accordance with secret serial number of the television set top box (See col. 3 lines 47-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the system for preventing an illegally duplicated optical disc drive from performing a normal playback operation disclosed by Kim updating the drive key of the optical disc drive in accordance with the drive ID such as that taught by Gammie so that all legally purchased optical disc drives containing the same drive key as the duplicated optical disc drives are able to play content encoded encoded with the new drive key (See Kim paragraph 38).

The above stated combination of Kim and Gammie does not disclose a judging unit operable, if the target apparatus identifier matches the verification apparatus identifier, to judge whether or not the acquired verification value matches the second verification value, and a registering unit operable, if the judging unit judges negatively, to register the target apparatus identifier on an unauthorized apparatus list.

Traw discloses a content protect system for DVD player/recorders (See col. 2 lines 61-65) having a judging unit operable ("Microcontroller" See col. 4 lines 12-25), if the target apparatus identifier matches the verification apparatus identifier, to judge whether or not the acquired verification value matches the second verification value ("If the code is tampered with Xhash in the device's certificate will not match the value



calculated over the corrupted code." See col. 6 lines 36-45, and a registering unit operable ("License Authority" See col. 5 lines 26-52), if the judging unit judges negatively, to register the target apparatus identifier on an unauthorized apparatus list ("If the integrity of the implementation is compromised and the License Authority is able to detect this, then the device ID may be added to the Certificate Revocation List." See col. 5 lines 63-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the above stated combination of Kim and Gammie to include a judging unit and a register unit such as those taught by Traw so that the system for preventing an illegally duplicated optical disc drive from performing a normal playback operation can actively detect duplicated optical disc drives.

Regarding Claim 2:

The above state combination of Kim, Gammie and Traw operates such that if judging unit judges affirmatively, the optical disc drive is determined not to be illegally duplicated and accordingly will continue to receive update drive keys (See Traw col. 6 lines 36-45).

Regarding Claim 7:

Traw discloses the distribution unit is operable to generate a random number to use as each verification value (See col. 5 lines 3-22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the above stated combination of Kim, Gammie, and Traw to further include having the distribution unit operable to generate a random number to use

as each verification value such as that taught by Traw in order to prevent hackers from generating the updated drive keys.

Regarding Claims 8, 12, and 16-19:

Kim discloses an optical disc drive for performing playback of content having a storage unit operable to store ("Key Calculation Block" See fig. 6 ref. no. 51 and paragraph 31), in correspondence with an apparatus identifier ("Drive ID" "Drive Maker AAA" See fig. 7 and paragraphs 28 and 37), a first value ("Drive Key 0x0000" See fig. 7 and paragraphs 37-40) generated by an unauthorized apparatus detection device ("Content Provider" See paragraphs 37-39) for detecting an unauthorized apparatus produced by copying ("Illegally Duplicated Disc Drive" See paragraph 38), an acquiring unit ("The laser of optical disc drive reads the key locker portion of the optical disc." See paragraphs 36-37) operable to acquire from a portable medium Optical Disc" See paragraph 36-37) an apparatus identifier ("Drive ID" "Drive Maker AAA" See fig. 7 and paragraphs 28 and 37) and a second verification value ("Drive Key 0x0001" See fig. 7 and paragraphs 37-40) that have been written, in response to the notification, on the portable medium by the unauthorized apparatus detection device ("If a drive manufacturer has manufactured an optical disc drive without license contract with a licensor, new key renewal information is recorded in new optical discs that are manufactured thereafter so that a drive key corresponding to the optical disc drive that has been illegally duplicated is not valid any longer." See paragraph 38), the second verification value having been generated by the unauthorized apparatus detection device ("New Key renewal information is recorded in new optical discs that are

manufactured thereafter." See paragraph 38 [The examiner respectfully points out it is inherently disclosed that the content provider has a device for pressing discs.]), and an update unit operable ("Key Calculation Block" See fig. 6 ref. no. 51 and paragraph 31), if the acquired apparatus identifier matches the apparatus identifier stored in the storage unit ("The content provider records the key renewal information, which includes the reset valid flag recorded in association with information of the maker "AAA" and the drive key '0x000', in the newly produced optical discs."), to replace the first verification value with the second verification value ("The Drive Key 0x0001 replaces the Drive Key 0x0000 as the valid drive key for decrypting the content stored on an optical disc." See paragraphs 17 and 26).

Kim does not disclose a notification unit operable to notify the unauthorized apparatus detection device of the apparatus identifier and first value.

Gammie discloses a television set top box that contains a secret serial number ("SSN Memory" See fig. 2 ref. no. 212 and col. 3 lines 47-53) and a content key used to descramble television content ("Key Memory" See fig. 2 ref. no. 207 and col. 3 lines 47-53). The content key is updated in accordance with secret serial number of the television set top box (See col. 3 lines 47-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the system for preventing an illegally duplicated optical disc drive from performing a normal playback operation disclosed by Kim updating the drive key of the optical disc drive in accordance with the drive ID such as that taught by Gammie so that all legally purchased optical disc drives containing the same drive key as the

duplicated optical disc drives are able to play content encoded with the new drive key (See Kim paragraph 38).

The above stated combination of Kim and Gammie does not disclose a notification unit operable to notify the unauthorized apparatus detection device of the apparatus identifier and first verification value.

Traw discloses a content protect system for DVD player/recorders (See col. 2 lines 61-65) having a notification unit ("License Authority" See col. 5 lines 37-47) operable to notify the unauthorized apparatus detection device of the apparatus identifier and first verification value ("The License Authority is responsible for the creation of Certificate Revocation Lists." See col. 5 lines 37-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the above stated combination of Kim and Gammie to include License Authority such as that taught by Traw so that content provider can update the device keys of the legally purchased DVD players when a manufacturer is producing a duplicated DVD player with a known device key.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRETT SQUIRES whose telephone number is (571) 272-8021. The examiner can normally be reached on 9:30am - 6:00pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BS/

/Christopher A. Revak/  
Primary Examiner, Art Unit 2431